BOOK REVIEWS

MARTCO LAMBERTINI (Translated by John Venerella). 2000. **A Naturalist's Guide to the Tropics.** (ISBN 0-226-46828-3, pbk.). The University of Chicago Press, 5801 S Ellis Ave., Chicago, IL 60637-1496, U.S.A. (Orders: 773-702-0279, 773-702-7956 fax, da@press.uchicago.edu, www.press.uchicago.edu). $25.00, 338 pp, 57 color photos, 11 color plates, numerous b/w halftones, 5 1/2" × 7 1/2".

Though unknown to most American readers, the author apparently is professionally trained and works as a conservationist with BirdLife International (UK) and as a freelance scientific journalist. His focus is to educate the public about the importance of conserving the tropics. As he says in the preface, "This is a work that is intended to establish among prospective world travelers a knowledge of the natural life and ecology of the Tropics, to make them seem less distant and unreachable, less unknown and mysterious." In this, I would say he has achieved his goal.

On the other hand, the publisher's flier highlights this book as "the first field guide in English to cover *all* the world's tropics in one volume" and the author states, "a guide to skim before the trip as well as to take along." I would say, "a reference to absorb thoroughly before the trip only." If you are looking for an all-in-one field guide (i.e., birds, mammals, reptiles, sea shells, trees, and flowers), you will be sorely disappointed. If, instead, you want to understand the factors shaping the tropical landscapes that you will be seeing or you want to understand why the tropics are so important, then this is book is worth your money and time.

The first three chapters cover the major physical factors—geologic history, climate and soils—while the next two cover general features of tropical plants and animals. There are five chapters detailing the structure and species of the major ecosystem types in the tropics, i.e., mangroves, forests, coral reefs, savannas, and deserts. The book concludes with an overview of tropical conservation and a series of precautions that travelers should observe to avoid elephant attacks and yellow fever, among others. The layout is very readable and includes many sidebars to extract more difficult or specific information from the general flow of the text. The color photographs are beautiful, and the drawings generally augment the writing.

The introductory chapters are well written and provide a good foundation for understanding tropical environments. The soils chapter should have been longer to relate the greater diversity of tropical soils and the factors giving rise to them. Also, I was surprised that the term, mycorrhizae, was not introduced, although the author did discuss "elevated recycling of nutrients". These chapters cover essential topics, such as, seasonality reflected in the structure and behavior of organisms, primary production, comparisons of similar conditions on different continents, species interactions, and human use. Standard evolutionary explanations are given for the phenomena of symbiosis, defense, population regulation, biodiversity, niches, dispersal, and convergence. The colored plates of birds given in this section are disappointing: 7 species each from Africa and Australasia, 8 from the Americas. The sidebar on palms was illustrated by drawings of only seven species. Having studied this group, I found at least three errors. 1) The drawing of *Phytelephas macrocarpa*, was incorrect. The species pictured represented an entirely different subfamily, probably a poorly drawn *Sabal*. 2) *Licuala grandis* is Asian not South American. 3) Coconut is pantropical, not just Indo-Pacific, although it may have originated there.

The ecosystem chapters are very informative, especially the one on mangroves, in terms of features common to that ecosystem type on all continents. For example, the one on forests distinguishes primary and secondary forests and describes canopy structure, forest characteristics (e.g., root buttresses, lianas, and epiphytes), light gaps and pioneer species, life histories of forest plants, fig-wasp symbiosis, growth of stranglers, ecology of forest animals (sidebars on cicadas, butterflies, ants, poi-

son dart frogs, treehoppers), adaptations of arboreal animals, and pollination and dispersal in the forest.

The last two chapters—conservation and traveling precautions—make this book especially useful and timely.

My recommendation is: Buy this book and read it in depth, book a tropical ecotour, then buy some good field guides for that specific region actually to take with you. And, as the author says, "Buon viaggio!"—*Roger W. Sanders, Associate Collections Manager, Botanical Research Institute of Texas, Fort Worth, TX 76102-4060, U.S.A.*

DAVID BIEK. 2000. **Flora of Mount Rainier National Park.** (ISBN 0-87071-470-8, pbk.) Oregon State University Press. 101 Waldo Hall, Corvallis, OR 97331-6407. (Orders: http://osu.orst.edu/dept/press/osupress.htm, 800-426-3797, 541-737-3166, 541-737-3170 fax). $29.95, 520 pp, 64 color photos, line drawings, 6" × 9".

This publication marks the first comprehensive treatment of the flora of Mount Rainier subsequent to George Neville Jones' work published in 1938. Mount Rainier was designated a National Park in1899 and since then much information has been gathered on the biota of the area. The *Flora of Mount Rainier National Park* by David Biek seeks to update Jones' earlier flora and covers the entire area within the boundaries of the park. According to the author, the goal of this book is "to provide a complete list of the native and introduced plants found in the Park, with keys and descriptions sufficient to distinguish each species from the others."

The volume begins with an introduction on how to use the book and clarifies its scope and intent. The author provides information on how to use the keys to identify plants and forewarns his readers of the inconstant nature of scientific names of plants. Next, facts on the Park, including location, topography and climate are given. The author follows with a discussion of plant communities and associations, citing 19 different types present in the Park and the groups of plants that can be found growing in each zone or community. A brief discussion of plant geography, distribution, weeds and rare plants allow the reader to become familiar with the flora of the Park. Last, a historical overview of explorations and studies, including ecological research on Mount Rainier, gives evidence of the long significance this area has had in our national heritage.

Of course, a majority of the book is dedicated to plants included in the flora and the treatment begins with a key to the major groups of vascular plants. After this key, the major groups are presented, fern and fern allies first, followed by gymnosperms, then dicots and finally monocots. Within each group, the families are listed alphabetically, followed by genera and species. There is a key to accompany each family and genus description so the reader can ascertain the taxon at hand. Species descriptions include scientific name and common name, a brief description of diagnostic characters, elevation, habit and habitat, as well as locations where it has been collected in the Park. Illustrations, reprinted from Hitchcock's *Vascular Plants of the Pacific Northwest*, are adjacent to most species descriptions. Color photos of selected species are found in the middle of the book. An appendix includes 79 plants added to the flora, which were observed by the author in the field or from herbarium specimens between 1996 and 1999. A brief glossary clarifies some essential terms and the bibliography cites critical publications. The author provides a single index with accepted names, synonyms, names misapplied and common names used in the book.

Although it is very convenient to have illustrations directly adjacent to the species descriptions, the limited margin results in a small space for inadequate illustration printing. The effect for